

Water-Data Report 2008

## **12210700 NOOKSACK RIVER AT NORTH CEDARVILLE, WA**

Puget Sound Basin  
Nooksack Subbasin

LOCATION.--Lat 48°50'31", long 122°17'35" referenced to North American Datum of 1927, in SW ¼ NE ¼ sec.28, T.39 N., R.4 E., Whatcom County, WA, Hydrologic Unit 17110004, on left bank at Highway 542 bridge at Nugents Corner, and at mile 30.9.

DRAINAGE AREA.--589 mi<sup>2</sup>, includes 5 mi<sup>2</sup> in Canada.

### **SURFACE-WATER RECORDS**

PERIOD OF RECORD.--October 2002 to September 2004 (gage heights only). October 15 to April 15, 2005 (discharge only). October 2005 to current year.

GAGE.--Water-stage recorder. Datum of gage is NGVD of 1929.

REMARKS.--Records fair, except for estimated daily discharges which are poor. U.S. Geological Survey satellite telemeter at station. Gage height record previous to October 1, 2004, needs to have a -0.12 ft correction applied.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 56,300 ft<sup>3</sup>/s, Nov. 6, 2006, gage height, 149.61 ft; minimum discharge, 478 ft<sup>3</sup>/s, Oct. 10, 2006, gage height, 139.11 ft.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 29,500 ft<sup>3</sup>/s, Dec. 3, gage height, 146.21 ft; minimum discharge, 935 ft<sup>3</sup>/s, Sept. 29, gage height, 139.84 ft; minimum gage height, 139.83 ft.

## 12210700 NOOKSACK RIVER AT NORTH CEDARVILLE, WA—Continued

**DISCHARGE, CUBIC FEET PER SECOND**  
**WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008**  
**DAILY MEAN VALUES**  
[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	9,220	1,970	1,820	2,260	1,770	3,650	1,970	3,090	8,030	12,300	3,410	3,010
2	9,410	1,850	1,850	2,400	1,760	2,800	1,890	2,760	7,260	11,100	3,190	2,510
3	7,880	2,120	15,800	2,550	1,650	2,410	1,850	2,770	6,680	11,100	2,660	2,200
4	6,260	3,720	23,700	3,260	1,580	2,320	1,850	3,060	9,340	9,720	2,430	1,990
5	4,220	2,720	10,800	3,740	1,630	2,110	1,840	3,790	7,820	7,180	2,470	1,870
6	3,000	2,240	6,190	3,200	1,820	1,940	1,870	4,230	10,300	6,860	2,570	1,890
7	6,170	2,220	4,580	2,750	2,070	1,870	2,140	4,380	8,420	5,310	2,750	1,810
8	8,960	2,490	3,770	2,510	2,670	2,140	2,200	3,950	7,250	5,100	2,770	1,660
9	4,010	3,250	3,320	2,510	2,870	2,250	2,080	3,430	6,750	5,460	2,620	1,590
10	3,610	4,520	3,030	2,920	3,540	2,550	2,000	3,330	8,530	5,160	4,030	1,460
11	3,760	3,500	2,780	4,460	3,630	5,270	1,960	4,210	6,950	4,170	2,700	1,400
12	2,790	3,350	2,630	4,100	3,050	4,250	2,010	3,760	6,500	3,980	2,230	1,440
13	2,290	3,880	2,530	4,230	3,080	3,330	3,110	3,390	7,480	4,220	2,150	1,360
14	2,000	2,980	2,550	3,980	2,510	3,020	3,300	4,930	8,280	4,200	2,260	1,270
15	1,910	3,570	2,900	4,160	2,170	2,860	2,910	7,060	7,170	3,760	2,620	1,280
16	2,210	14,400	2,890	3,340	2,110	2,690	2,580	9,300	7,490	3,560	2,700	1,290
17	2,190	7,950	2,910	2,920	1,960	2,620	2,420	13,400	7,770	3,480	2,880	1,300
18	2,140	5,660	2,860	2,650	1,860	2,600	2,480	16,300	6,700	3,370	2,870	e1,380
19	7,430	4,290	3,590	2,550	1,830	2,420	2,350	13,400	6,240	3,150	2,770	e1,390
20	5,130	3,580	3,610	2,370	1,870	2,410	2,190	18,700	6,340	3,080	4,210	e1,300
21	3,640	3,140	2,970	2,190	1,890	2,350	2,060	13,900	8,340	3,130	16,600	e1,480
22	8,590	2,830	2,900	2,070	1,840	2,210	1,950	8,920	8,780	3,190	6,410	e1,560
23	7,770	2,590	3,260	1,990	1,890	2,430	1,920	7,280	7,700	2,930	3,560	1,440
24	6,460	2,390	4,070	1,930	1,890	2,780	1,950	7,480	6,790	2,640	3,330	1,150
25	5,540	2,230	3,200	1,850	1,780	2,410	2,020	9,970	6,480	2,810	4,630	1,360
26	3,900	2,180	3,000	1,810	1,760	2,350	1,900	11,600	6,580	2,910	3,080	1,410
27	3,210	2,380	2,750	1,810	1,810	2,260	2,030	10,800	6,230	2,810	3,980	1,170
28	2,820	2,140	2,820	1,730	1,970	2,160	2,890	11,000	8,570	2,720	4,000	1,060
29	2,590	2,030	2,790	1,700	2,200	2,140	4,630	10,600	11,700	2,520	5,460	1,000
30	2,340	1,890	2,610	1,690	---	2,090	3,750	8,320	12,800	3,460	7,330	1,020
31	2,120	---	2,430	1,750	---	2,040	---	7,440	---	2,570	3,930	---
<b>Total</b>	143,570	104,060	136,910	83,380	62,460	80,730	70,100	236,550	235,270	147,950	118,600	46,050
<b>Mean</b>	4,631	3,469	4,416	2,690	2,154	2,604	2,337	7,631	7,842	4,773	3,826	1,535
<b>Max</b>	9,410	14,400	23,700	4,460	3,630	5,270	4,630	18,700	12,800	12,300	16,600	3,010
<b>Min</b>	1,910	1,850	1,820	1,690	1,580	1,870	1,840	2,760	6,230	2,520	2,150	1,000
<b>Ac-ft</b>	284,800	206,400	271,600	165,400	123,900	160,100	139,000	469,200	466,700	293,500	235,200	91,340
<b>Cfsm</b>	7.86	5.89	7.50	4.57	3.66	4.42	3.97	13.0	13.3	8.10	6.50	2.61
<b>In.</b>	9.07	6.57	8.65	5.27	3.94	5.10	4.43	14.94	14.86	9.34	7.49	2.91

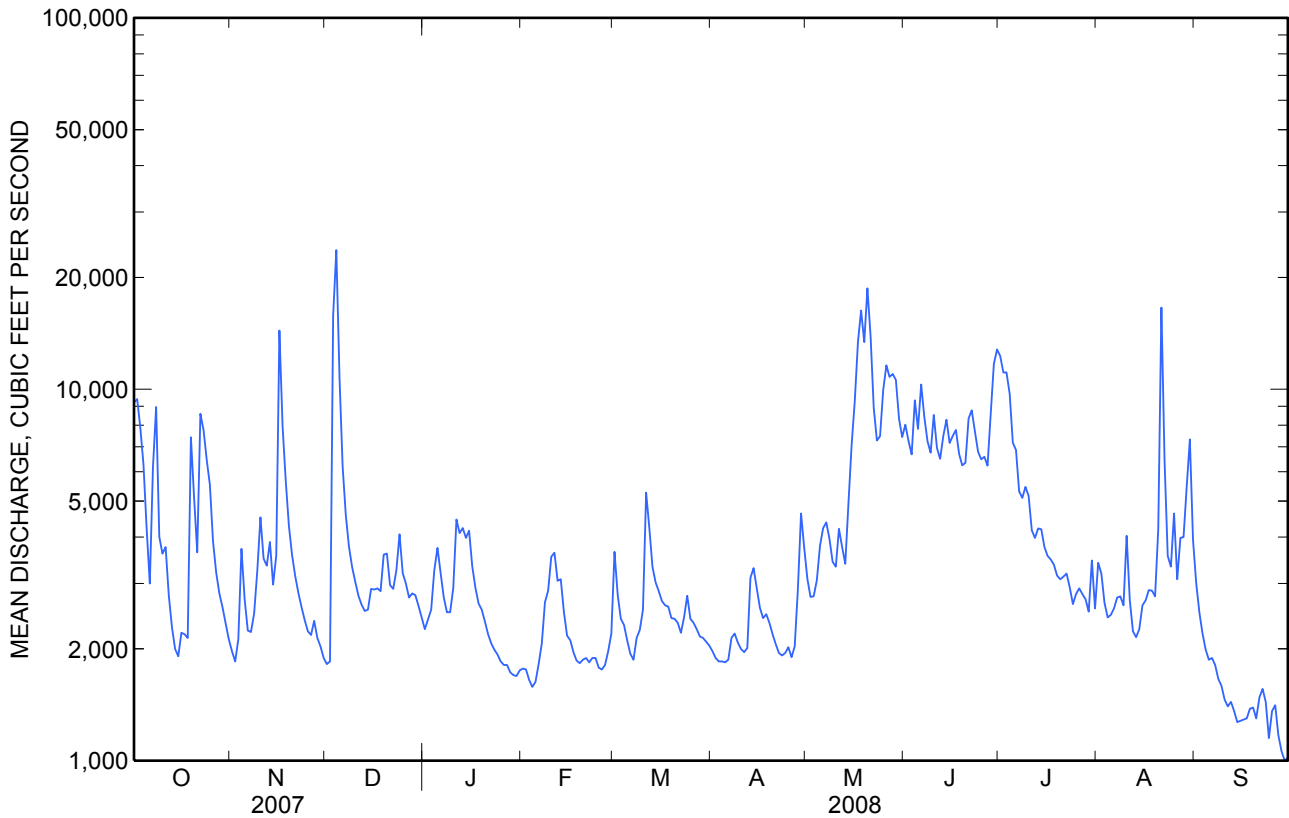
## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2005 - 2008, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
<b>Mean</b>	2,945	5,538	4,896	4,997	2,803	3,467	3,191	5,600	5,947	3,969	2,312	1,298
<b>Max</b>	4,631	7,743	5,703	7,642	3,730	7,056	4,133	7,631	7,842	4,773	3,826	1,535
<b>(WY)</b>	(2008)	(2007)	(2005)	(2006)	(2006)	(2007)	(2007)	(2008)	(2008)	(2008)	(2008)	(2008)
<b>Min</b>	855	3,469	4,416	2,690	2,122	1,933	2,337	4,371	4,746	2,987	1,478	1,148
<b>(WY)</b>	(2007)	(2008)	(2008)	(2008)	(2005)	(2006)	(2008)	(2007)	(2007)	(2006)	(2006)	(2006)

12210700 NOOKSACK RIVER AT NORTH CEDARVILLE, WA—Continued

SUMMARY STATISTICS

	Calendar Year 2007		Water Year 2008		Water Years 2005 - 2008	
Annual total	1,437,229		1,465,630			
Annual mean	3,938		4,004		3,906	
Highest annual mean					4,019	
Lowest annual mean					3,693	
Highest daily mean	25,600	Mar 12	23,700	Dec 4	36,800	Nov 6, 2006
Lowest daily mean	812	Sep 24	1,000	Sep 29	522	Oct 10, 2006
Annual seven-day minimum	865	Sep 20	1,170	Sep 24	557	Oct 7, 2006
Annual runoff (ac-ft)	2,851,000		2,907,000		2,830,000	
Annual runoff (cfsm)	6.69		6.80		6.63	
Annual runoff (inches)	90.77		92.57		90.10	
10 percent exceeds	6,270		8,100		7,390	
50 percent exceeds	3,500		2,860		3,100	
90 percent exceeds	1,450		1,810		1,340	



**12210700 NOOKSACK RIVER AT NORTH CEDARVILLE, WA—Continued****WATER-QUALITY RECORDS**

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: May to September 2008.

INSTRUMENTATION.--Design Analysis H-377 temperature sensor interfaced with a Design Analysis H-500XL data logger which in turn is also interfaced with a Design Analysis H-222DASE (HDR) GOES radio for satellite telemetry. A 12 volt deep cycle battery with solar charging provides power.

REMARKS.--Temperature records good.

EXTREMES FOR PERIOD OF RECORD.--

WATER TEMPERATURE: Maximum recorded, 18.2°C, Aug. 14; minimum recorded, 5.9°C, June 10.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum recorded, 18.2°C, Aug. 14; minimum recorded, 5.9°C, June 10.

**TEMPERATURE, WATER, DEGREES CELSIUS  
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008**

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	October			November			December			January		
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
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31	---	---	---	---	---	---	---	---	---	---	---	---
Month	---	---	---	---	---	---	---	---	---	---	---	---

## 12210700 NOOKSACK RIVER AT NORTH CEDARVILLE, WA—Continued

 TEMPERATURE, WATER, DEGREES CELSIUS  
 WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	February			March			April			May		
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
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28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	9.2	6.6	7.3
30	---	---	---	---	---	---	---	---	---	9.5	6.2	7.6
31	---	---	---	---	---	---	---	---	---	10.7	6.5	8.6
Month	---	---	---	---	---	---	---	---	---	---	---	---

## 12210700 NOOKSACK RIVER AT NORTH CEDARVILLE, WA—Continued

**TEMPERATURE, WATER, DEGREES CELSIUS**  
**WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008**

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	June			July			August			September		
1	9.3	7.0	7.7	13.7	8.8	11.2	13.7	10.0	11.6	12.6	9.1	10.7
2	8.0	6.4	7.0	13.5	8.8	11.2	13.9	10.5	11.9	12.5	9.2	10.8
3	7.7	6.7	7.2	12.0	9.2	9.9	16.1	10.0	12.7	14.0	9.6	11.6
4	8.2	6.4	7.2	11.6	8.6	10	17.2	11.3	14.0	14.6	10.3	12.2
5	7.4	6.6	7.0	10.7	8.8	9.7	17.6	11.6	14.5	12.6	10.7	11.4
6	8.5	6.2	7.3	11.2	8.8	10.0	17.2	12.1	14.6	14.3	10.6	12.1
7	8.3	6.8	7.4	14.2	8.4	11.0	17.4	12.4	14.8	15.2	10.6	12.7
8	9.2	6.5	7.7	15.0	9.6	12.2	16.8	12.2	14.5	14.6	10.5	12.5
9	8.3	7.1	7.6	15.3	10.2	12.6	14.8	12.1	13.1	14.9	10.7	12.6
10	7.8	5.9	6.9	13.0	9.9	11.4	14.0	11.1	12.2	14.6	9.9	12.1
11	8.0	6.9	7.4	14.7	8.7	11.5	16.4	10.5	13.1	15.0	10.2	12.4
12	10.6	6.9	8.5	15.8	10.0	12.7	15.8	11.4	13.6	14.9	10.6	12.6
13	11.6	8.1	9.6	16.0	10.5	13.2	17.8	12.4	14.8	14.6	10.2	12.3
14	10.7	7.1	8.8	15.1	10.3	12.7	18.2	12.4	15.1	14.8	10.0	12.3
15	11.8	7.6	9.8	15.7	10.0	12.7	17.2	12.8	15.0	15.2	10.4	12.7
16	12.8	7.6	10.1	16.1	10.4	13.1	17.8	12.5	15.0	15.1	10.5	12.7
17	10.8	7.8	9.0	15.8	10.6	13.2	15.6	12.6	14.2	13.8	10.5	12.2
18	10.4	7.6	8.9	15.0	10.7	12.7	14.3	12.4	13.2	---	---	---
19	10.1	7.4	8.7	16.2	10.9	13.3	14.1	11.7	12.6	---	---	---
20	11.9	7.9	9.8	16.6	10.9	13.6	12.9	11.5	12.1	---	---	---
21	10.5	8.2	8.9	16.9	11.3	14.0	11.6	10.8	11.3	---	---	---
22	11.6	7.7	9.3	15.4	11.6	13.4	14.1	9.9	11.7	---	---	---
23	11.2	7.1	9.2	13.6	11.1	12.0	15.6	11.2	13.1	11.8	8.3	10.0
24	12.8	8.0	10.2	16.4	10.0	12.8	13.7	11.8	12.4	---	---	---
25	12.6	8.0	10.2	16.4	11.4	13.8	14.2	11.0	12.4	10.9	9.8	10.3
26	11.4	8.6	9.9	14.8	11.5	13.3	13.9	10.8	12.1	12.7	9.7	11.0
27	14.0	7.9	10.6	13.5	11.8	12.5	12.1	10.6	11.3	13.6	10.5	11.8
28	14.4	9.0	11.6	15.5	10.0	12.6	11.8	10.6	11.1	13.1	9.4	11.3
29	14.0	8.7	11.3	13.7	11.3	12.0	12.5	11.0	11.6	13.3	8.9	11.3
30	13.9	8.9	11.3	12.9	10.2	11.4	12.4	9.9	11.0	12.9	9.5	11.3
31	---	---	---	11.6	9.5	10.6	12.9	9.3	10.8	---	---	---
Month	14.4	5.9	8.9	16.9	8.4	12.1	18.2	9.3	12.9	---	---	---